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ABSTRACT

This study explored how past experiences, current career development, and expectations for assistance impact the service delivery of computer-assisted career guidance systems. The subjects (N=4) were selected from adults who had sought services from a university-based career center and who were voluntarily participating in a research project designed to collect data on this population. The subjects were chosen on the basis of the following factors: sex, age, head-of-household, anticipation of career change, interest in exploring career options, willingness to use a computer-assisted career guidance system as one component of career counseling services, willingness to meet for a minimum of four sessions with a career counselor, and willingness to complete a contract for service provision. Subjects used either DISCOVER for Adult Learners or System of Interactive Guidance and Information (SIGI) PLUS. Open-ended interviews were conducted prior to, during, and after each subject's computer experience. It was found that the adult subjects differed in terms of the complexity and time frame for their career decision making in comparison to typical adolescents and young adults who received services from university-based career centers. The subjects had expectations that they would receive professional assistance that would help in: (1) structuring the career decision making process; (2) clarifying self-knowledge; and (3) gaining access to career information resources. The extent to which this expectation was met varied with each subject. Thirty-nine references are included. (Author/LLL)

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Computer-Assisted Career Guidance and the Adult Learner - Two Case Studies: Technical Report No. 8

by

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Abstract

The decision to seek career counseling services as an adult arises from a complex interaction of past experiences, current career development, and expectations for assistance. This study explored how these multiple motivations impact the service delivery of computer-assisted career guidance systems. The subjects were selected from adults who had sought services from a university-based career center and who were voluntarily participating in a research project designed to collect data on this population. The subjects selected for this qualitative component of the study were chosen on the basis of the following factors: sex, age, head-of-household, anticipation of career change, interest in exploring career options, willingness to use a computer-assisted career guidance system as one component of career counseling services, willingness to meet for a minimum of four sessions with a career counselor, and willingness to complete a contract for service provision. The study was intended as a process of exploration and discovery. As such, open-ended interviews were conducted prior to, during, and after each subject's computer experience.

It was found that the adult subjects participating in this qualitative study differed in terms of the complexity and time frame for their career decision making in comparison to "typical" adolescents and young adults who receive services from university-based career centers. The subjects had expectations that they would receive professional assistance that would help in: 1) structuring the career decision making process; 2) clarifying self-knowledge; and 3) gaining access to career information resources. The extent to which this expectation was met varied with each subject. Implications for practice and for future research have been presented to stimulate further exploration in this area of career guidance for adults.

Background

Over the past twenty years a consensus has emerged among practitioners and researchers that adults have career guidance needs different from adolescents and young adults. As a result of changes in the economy, the labor market, and the family, adults are increasingly facing issues such as mid-life career change (Leibowitz & Lea, 1986; Zunker, 1986; Brown, 1984; Gysbers & Assoc., 1984; Herr & Cramer, 1984; Okun, 1984; and Aslanian & Brickell, 1980), dual-career couples (Sekaran, 1986; Gilbert, 1985; Miller, 1984; Pepitone-Rockwell, 1980; Bryson & Bryson, 1978; and Rapoport and Rapoport, 1976) and women returning to education and work after a long absence (Betz & Fitzgerald, 1987; Metzger, 1986; Diness, 1981; Berman, 1980; and Burack, Albrecht & Seitler, 1980).

In response, a variety of services and resources have been designed to meet the career guidance needs of adults (Johnson & Pyle, 1984; Herr & Cramer, 1984; Sampson, Shahnasarian & Maddox, 1984; and Maze & Cummings, 1982). A recent innovation has involved the development of computer-assisted career guidance (CACG) systems for adults. Two types of systems currently exist. The first is primarily designed to be used in an educational context and is most often found in community colleges, universities, vocational technical schools, and adult education centers. Examples include DISCOVER for Adult Learners (American College Testing Program, 1986) and SIGI PLUS (Educational Testing Service, 1986). The second type of system is primarily designed to be used in an employment context and is most often found in business and industry settings (Shahnasarian, 1987). Examples include DISCOVER for Organizations (American College Testing Program, 1986) and CareerPoint (Conceptual Systems, 1986).

Due to the recent emergence of CACG systems designed for adults, research on the effectiveness of these computer applications is limited. The data that does exist involved evaluating adults' use of CACG systems originally designed for high school and college students. Chapman and Greenberg (1985), Splete (1984), and Splete, Elliott, and Borders (1985) report positive adult user reaction to using the DISCOVER system (American College Testing Program, 1984). Marin (1984) found that adults using DISCOVER showed improvements in decision-making commitment and certainty, as well as decidedness. The above studies, however, have two important limitations. First, the use and impact of adult versions of CACG systems have not been studied. Second, the vast majority of CACG research is quantitative in nature, and the type of data obtained are limited by the constraints inherent in objective measures and the data reduction inherent in statistical analysis.

In view of the recent availability of adult versions of CACG systems and the limited research data available, an exploratory research methodology is needed. Specifically, a need exists to more fully understand and document the interaction between the

characteristics of adults and the capabilities of computer-assisted career guidance services. Data from this type of research can aid practitioners in designing computer-assisted career guidance services to more effectively meet the needs of adults and aid researchers in formulating hypotheses for future investigations.

Purpose of the Study

This study was designed to qualitatively explore how adults' past experiences, current career development, and expectations for assistance impact computer-assisted career guidance service delivery.

Methodology

Qualitative Approach

A qualitative methodology was selected as a logical starting point for exploratory research. Alexander (1980) notes: "...the richness of the texture of one's life tends to be lost in methodologies that use such operations as ordering, quantifying, and prepared questionnaires" (p. 18). The decision to undertake these case studies grew out of a recognition that numerous sociological, economic, technological, and psychological factors affect career decisions for adults. These multiple motivations include pressures from the environment as well as pressures from self (Aslanian & Brickell, 1980). Pedro (1983) suggests that career change occurs in relation to antecedent experiences and future alternatives, and she advises exploring the interaction between career choice and the domains of life: family, society, and recreation. Career decision making is a continuous, tentative, and often not a very logical process (Osipow, 1983; Fredrickson, 1982; and Sher, 1979). Therefore, is best examined as a process rather than as mutually exclusive independent and dependent variables. Yin (1984) refers specifically to the case study as the research strategy which "allows an investigation to retain the holistic and meaningful characteristics of real-life events--such as individual lifecycles..." (p. 14).

Selection of Subjects

Subjects for this study were selected from adults who voluntarily sought services from a university-based career center. A career center staff member assisted each adult seeking services to identify their needs and select appropriate interventions. In situations where career counseling was appropriate, adults were given the option of participating in an evaluative research project. The initial counseling session included the collection of demographic information and a detailed explanation of the purpose of the study and the data collection procedures. Of the 89 adults who participated in the research project, four were selected for participation in a qualitative component of the study on the basis of the following factors:

1) sex (equal balance of men and women);
2) age (midlife - between 30 and 50);
3) head-of-household;
4) the anticipation of some type of career change;
5) an interest in exploring career options;
6) willingness to use a computer-assisted career guidance system as one component of career counseling services;
7) willingness to meet for a minimum of four sessions with a career counselor; and
8) willingness to complete a contract for service provision.

Of the four adults, two were White males and two were White females, ranging in age from 34 to 41, with a mean age of 36. One man and woman were assigned to DISCOVER for Adult Learners and one man and woman were assigned to SIGI PLUS. Two of the four subjects completed their participation in the study, until a mutually agreed upon termination. One of the men dropped out of the study because of a sudden job reassignment in another part of the country. The other man became involved in divorce proceedings and decided to remain in his current job and seek career counseling services at a later date.

Procedures

Each adult completed a research participation release form prior to data collection indicating they were aware that notes would be taken during sessions, that all information would be kept confidential, and that actual names would not be used in any research reports or staff case conferences. Two-hour sessions were scheduled to use the computer assisted guidance systems once a week for three consecutive weeks. The four interviews with the career counselor were held both during and after their computer experience at a time and place convenient to the participant. In addition to career counseling and the computer-assisted career guidance systems, each adult was encouraged to use the print-based and audio-visual career information resources available in the center. Adults were asked to use only the computer-assisted career guidance systems to which they had been assigned (either DISCOVER for Adult Learners or SIGI PLUS) until after the completion of the study.

Structure of the Interviews

The focus of the interviews was to gather each adult's perception of personal and family career-related experiences that s/he was able to recall and chose to share. The participants were asked to discuss their current work situation as well as their occupational daydreams. They were encouraged to share their stories as they wished, without concentrating on a chronological time frame presentation. Open-ended interviews were used to facilitate that process. The experiences of the adults in receiving prior career counseling services were also noted as the study progressed.

Two approaches were used to collect data through the open-ended interviews: 1) the informal conversational interview; and 2) the general interview guide approach. Patton (1980) notes that the difference between these two approaches is the extent to which the questions are determined before the interview. With the informal conversational interview, the spontaneity of the natural flow of an interaction provides the basis of the data. The beginning of each session was based on this informal conversational approach. If one of the adults seemed "stuck," and/or if particular topics from the case study notes needed clarification or expansion, the career counselor would ask specific questions. The interview guide presumed that there was certain common information needed from each adult, and it served as a checklist to help the interviewer obtain similar data from each adult participating in the study. The interview guide consisted of questions in general career-related areas: What past experiences may have served to shape your career path? What factors are influencing your present career exploration? What expectations brought you to the career center? What interactions affected your experience at the Career Center? Both the above open-ended approaches support Patton's (1980) principle that interviewing provides, "a framework within which respondents can express their own understandings in their own terms" (p. 205).

By the end of the interview sessions, data had been obtained from each subject about career-related events and experiences from childhood, adolescence, young adulthood, and adulthood. In addition, a sense of the personal and emotional issues confronting each adult was obtained.

Results - The Case of Joyce

Background Information

Joyce is a 36-year-old White female who grew up in New York City with her parents and an older sister. Her father was an elevator operator and her mother was employed as a secretary. Joyce described her home life as having been "very unstable," with an alcoholic father who both physically and emotionally abused his wife and daughters. She was determined from early in her life to "move ahead" and saw education as her "way out." Although her grades in high school were mediocre, Joyce had a college degree as her goal. She was accepted into a small, private college in a nearby town. However, when she asked her father for the money he had promised would be available for her education, she learned that he had used it to support his alcohol dependency. Joyce was both extremely disappointed and very angry. Her anger made her even more determined to find a way to go to college. She enrolled as a part-time student in a local community college and worked part-time to support herself.

After several years, Joyce married, moved, and gave birth to a daughter. During this period, she continued to attend school on a part-time basis and received her bachelor's degree in sociology after nine years. After graduation Joyce accepted an

administrative position in a social service agency. She thoroughly enjoyed her work; however, after several months she was laid off due to a funding cutback. During this period, both Joyce and her husband were drinking heavily. Partly due to this problem as well as to her husband's unwillingness to seek counseling, Joyce made the decision to seek a divorce. After several months of unemployment, Joyce accepted a position as a caseworker, only, she said, because she "did not have the luxury of looking around for a more satisfying job." She did not enjoy her job, was not happy with herself, and felt quite depressed. Shortly thereafter she remarried. Joyce quit her job almost immediately. In fact, she indicated that one reason for marrying again was so that she would not have to work outside the home. At the same time, due to their financial situation, Joyce did hold a variety of part-time and temporary positions for the next several years.

Present Situation

Joyce initially came to the Career Center for advice about career options and help in identifying her skills and interests. She expressed boredom and frustration with her secretarial position and, at the same time, a need for a full-time job. Joyce was separated from her second husband at this time and was initiating divorce proceedings when she first came to the center. She had responsibility for two children, a fourteen-year-old daughter from her first marriage, and a three-year-old daughter from her present marriage.

Joyce had completed a four-year liberal arts college degree. In exploring her career options, she was interested in learning what areas would be available without further schooling as well identifying options which might require additional formal education. She said she would return to school only if it was necessary to pursue a particular career.

Joyce learned about the services available at the career center through another counselor she was seeing. Initially, Joyce was reserved and reluctant to share much about her personal situation (even though she had readily volunteered to participate in the study). She had been through a vocational assessment several years earlier while attending a community college and had found it helpful. It was this previous experience that led her to seek assistance at the center.

Joyce was very task-oriented and, after her initial meeting with the counselor, would regularly call and schedule computer time. She spent approximately six hours (over four sessions) interacting with SIGI PLUS before requesting a second appointment with the counselor. During the interim, the counselor would "check in" with her, but Joyce said she was not ready to meet yet. At the second interview, she had specific questions about her printout and also wanted further information on occupational areas that had particularly interested her.

She expressed frustration because she was personally interested in finding an occupation which provided an opportunity to interact with people. However, the data she inputted into SIGI PLUS identified "working with data" as a strength for her, while she scored low in "working with people." While Joyce recognized that she had strong organizational skills and a facility to work with computers, she was interested in a career in which she would also be able to use her creativity. Creativity, security, stability, and helping others were high values for Joyce.

The counselor made print-based media resources available to Joyce, and she explored particular areas in more depth. In addition, the counselor discussed using informational interviews as a strategy to gain more data. At this second meeting, Joyce was more relaxed and willing to share personal information.

Joyce spent the next few weeks reviewing her SIGI PLUS printout results, doing informational interviews, and continuing her interaction with SIGI PLUS. She spent a total of ten hours on SIGI PLUS. At that time she completed the forms necessary to document her participation in the study. Joyce then asked if it would be possible for her to interact with DISCOVER for Adult Learners. (In a later interview with the counselor, she indicated she had found the systems comparable, although she found the World-of-Work Map in the DISCOVER system "somewhat confusing and limiting."

To date, Joyce has spent twenty hours utilizing the services at the career center, including SIGI PLUS, interviews with a counselor, printed resources, and DISCOVER for Adult Learners. She has also spent numerous hours conducting informational interviews. She stated that she has been pleased and satisfied with the resources and activities available to assist her career planning.

Joyce's persistence and readiness to devote time and energy to the career exploration process facilitated her career change decision. She called two weeks after her final session to say that, after numerous informational interviews, she had decided to enter the landscape design program at a local university. She planned to enroll on a part-time basis while continuing to work full-time. She has shared her plans with her present employer, who is willing to arrange a flex-time schedule for her. Joyce also said she would explore financial aid options which may enable her to eventually return to school on a full-time basis. Joyce stated that her interactions with the computer-assisted guidance systems, as well as the personal attention by the career counselor, gave her both the information and the confidence she needed to take steps toward making a career change. Joyce was excited about her decision and said: "I just wanted to call and let you know, because your support and help were so important in helping me make my decision."

Responses to Specific Questions

1) What past experiences may have served to shape your career path?

Joyce indicated that her father was the strongest influence in shaping her career path. As a result of his alcohol dependency, Joyce did not have financial support to attend college and it took nine years of combining work and school before she received her degree. Furthermore, Joyce did not receive emotional support for her desire to get a college degree; her father believed that "a woman's place is in the home." This lack of financial, as well as emotional support, perpetuated low self-confidence. She noted that one outcome of this has been that she has not typically sought positions comparable to her educational background. Joyce had little confidence in herself or her abilities when making her early career choices.

After leaving home, Joyce assumed more responsibility for her life decisions. For example, she said that recognizing her own alcohol dependency, and dealing with it through Alcoholics Anonymous, made her more aware of personal strengths and skills. Still, however, Joyce had in mind her father's message that she would marry and have someone take care of her. Joyce said she expected that in both her marriages. She now realizes that she can only depend on herself, and that if she does marry again, she would not be willing to become completely dependent on a spouse. She said she has grown up and recognized that she would want to keep a better balance between marriage, family, work, recreation, and community activities.

2) What factors are influencing your present career exploration?

Feeling unhappy and dissatisfied on a day-to-day basis with her present job brought Joyce to the point of recognizing she was ready for a change. She knew she had the skills and capabilities to be doing more and expressed a desire to feel challenged by her work. Prior to coming to the career center, Joyce spent time reflecting on what she wanted and was not getting from a job. The main frustration she expressed was the lack of creativity in her secretarial position. She recognized that a simple job change would not be satisfying and that, in fact, she needed a new career direction. She wanted more opportunity for personal interaction and a greater sense of accomplishment in her job. Another influence on her decision to explore a new career direction was Joyce's realization that she could not count on either of her former husbands for child support and that she was unable to provide comfortably for her two children and herself on her present salary.

3) What expectations brought you to the career center?

Joyce initially came to the career center because of a positive experience she had previously had with vocational assessment at a community college. She realized that she was at another cross-road in her life and was experiencing a need to be more emotionally and financially self-sufficient. Joyce came to

the center for support as she went through the process of clarifying her career direction. She was aware of some of her skills, such as a facility for organization and working with details, good writing skills, and pride in her work. Joyce was particularly interested in incorporating her creative skills into a career, yet was uncertain how to combine the two. For example, Joyce enjoyed landscaping her yard, decorating her home, and working with crafts, and wanted to find a way to incorporate those interests into her work.

Joyce said she wanted specific information that would help her answer questions such as: What am I good at? What do I like? How much money is available in a field? How likely is it that I will find a job in a particular area? She also wanted help in identifying resources, such as financial aid, that might be available to her. Joyce was also looking for emotional support since she often underestimates herself and needed "someone from outside myself to help me see myself more clearly."

Joyce knew the process would not be easy and that "while change is good, it is also very painful." She was willing to assume responsibility for herself and expressed a desire to "work as hard and as long as I need to" to expand her options.

4) <u>What interactions affected your experience at the career center?</u>

Joyce stated that her experience at the career center was positive and that she received the support and assistance she needed to clarify her career direction. She noted that the SIGI PLUS print-out was useful because she was able to review it on her own time, and then return to the center for more specific information from SIGI PLUS, as well as from other print-based resources. Joyce said that meeting individually with a counselor and participating in the qualitative research study added an important dimension to her career exploration because it provided an opportunity for her to clarify her goals by talking about them: "Sharing my story and my goals helped me figure out who I am and where I'm going." Another strategy of particular value was the informational interview--which she used extensively before making her decision. Joyce also identified a frustration about visiting the career center during the day "when there was so much activity and where I felt uncomfortable with the 'younger' counselors."

Joyce was feeling personally pressured to "move on," not so much out of her present job, as out of her secretarial "mode." That pressure at times seemed to make her anxious to have all the answers immediately, even though she was aware that career exploration is a process that takes time and emotional energy to work through.

Results - The Case of Ann

Background Information

Ann is a 30-year-old White female who was raised in a small Mississippi town with four brothers and sisters. Her father was a tenant farmer who held various odd jobs to support his family. Ann described her father as "very intelligent, even though he had no formal schooling past the eighth grade." She said her mother "never did much of anything, except complain."

Formal education was not perceived as important by her parents and was not encouraged; in fact, two of her brothers did not finish high school. At the same time, Ann noted that from the time she was four years old, she had a "burning desire to know things," and she dreamed of someday going to college. Ann was the first in her family to attend college. She did not receive financial support from her family for her college education. Ann indicated that her mother opposed her decision to attend, while her father was noncommittal when she announced she was going. She felt that neither parent understood her desire to continue with school.

Ann said she never really fit in, either at home or at school. She described herself as a "difficult teenager," saying she was a loner and often depressed. She spent much of her time reading and said she was "always in trouble" with her mother because she would hide in the trees with a book instead of doing her chores around the farm. At the same time, Ann was on several sports' teams and was her high school class president. When asked about the apparent incongruity, she shrugged her shoulders and said she couldn't explain it, except that it may have been because she was smart and there were only twelve in her graduating class.

The impetus for her decision to attend college was the encouragement and support of her high school biology teacher. This woman acted as her mentor and encouraged Ann throughout her college years. Ann attended a local community college for two years, where she completed her basic studies and then transferred to Memphis State University. She majored in science--and said it was because her mentor was a science teacher.

In college, Ann played softball and volleyball and found herself becoming more socially outgoing. At the same time, she said there were periods when she became very depressed. In fact, she was diagnosed as a manic depressive and she dropped out of school for a while. In school, Ann was a part-time student, maintained a 4.0 average and had a full-time job. She graduated with her bachelor of science degree when she was 26 years old.

Ann said that after she graduated, she felt lost. She no longer had any goal to work toward and found herself becoming more depressed. She said that she had previously been able to control her depression with medication; however, with no

immediate goal, she found herself unable to control her depression and, for a while, did nothing but stay in her apartment. After several months, she accepted a position working in a laboratory, noting that she "had to be away from people...to be some place where I didn't have to interact much with anyone." At first she enjoyed her work, but gradually became bored with its monotony.

After several years, Ann married and enjoyed "being taken care of by someone who adored me!" She quit her job in the lab and became involved in various hobbies around her home, such as gardening and reading.

When she and her husband moved to Tallahassee, she made a half-hearted attempt to find another laboratory job. She applied with the state; however, when she learned that her application had been inadvertently sent to the wrong office, she did not try again. She found herself gradually becoming more and more depressed and, although she was seeing a therapist, Ann said she felt "at loose ends."

Present Situation

Ann initially came to the career center because her husband, who was considering a career change, spoke enthusiastically of the services available. A full-time homemaker since moving to Tallahassee several years ago, Ann enjoys tending her garden, taking Yoga classes and participating in a book club. At the same time, she said she was ready--and healthy enough--to explore other options and was "tired of being at home." Ann noted that she had been "too depressed to do anything until just now." She is currently involved with a mental health therapy group and said she derives a great deal of support from the group. In fact, Ann credited the support of the group with leading her toward considering a life change. She hoped that the services available at the career center would help her define a career direction and career goals.

Ann had a bachelor of science degree and several years of work experience as a laboratory technician. However, she was not interested in pursuing science, either through advanced schooling or as a career. She had taken courses in the area of library science when she first moved to Tallahassee, intending to pursue her master's degree. Now, she said, her values have changed and she was interested in more "people involvement" in her career.

When Ann first came to the career center, she was only interested in talking with a counselor. She did not appear to be clear about any future personal goals or directions and, at her first meeting, wanted to talk about the many different things on her mind. When the counselor explained the research project, Ann was enthusiastic and asked if she could be involved. What captured her interest was the individual attention she would be getting from the counselor.

Ann scheduled her appointments on DISCOVER for Adult Learners to coincide with the times her husband had arranged to be at the center. Each time she came, Ann first checked in with her counselor--"just to say hi!" She occasionally came to look for the counselor while she was interacting with the computer to show the counselor her print-out and to ask for assistance. Ann continued to be fairly dependent on the counselor throughout her participation in the project. She spent a total of six hours on DISCOVER for Adult Learners, and, for each hour on the computer system, Ann spent an hour with the counselor. Although the counselor made print-based media available to Ann, she did not follow through with utilizing it. She did conduct several informational interviews and described them as "very helpful" since she was still at an exploratory stage of career choice.

Responses to Specific Questions

1) What past experiences may have served to shaped your career path?

Ann responded that her father had many diverse interests even though he had little formal education, and she felt that her own "burning desire to know things" came from her father's interest in the world around him. Ann said that, for her, "knowing things" had always meant that she would move away from her rural environment and attend college. She identified her high school biology teacher as the one who encouraged her to pursue a college degree and helped her locate the resources to do so. Ann also noted that learning came easy to her, and she did not doubt that she would be successful in college.

Ann's periods of depression had a direct influence on her career path. She said they held her back from "doing anything important or anything that I really wanted to." Ann majored in science because her mentor had a science background, and she took a job as a laboratory technician in order to avoid interacting with others. She commented that she never had any confidence in herself or her abilities and, consequently, was very indecisive in whatever she did.

Ann believes she has always "floundered" and has never been able to settle on a career direction because of this lack of self-confidence. She related this back to her family's lack of interest in her education and said she never received guidance or support.

2) What factors are influencing your present career exploration?

Ann indicated that her recent attempt to focus on a career has been, to a large extent, due to the support she has received from her husband as well as from her therapy group. She said she feels stronger and healthier and able to manage her life now in a way she was never able to do in the past. Ann also said she was tired of being at home and wanted to "expand" her universe and begin doing something for others rather than always focusing on herself. Seeing her husband's success and the confidence with

which he has moved ahead in his career also provided an impetus for Ann to consider identifying, for the first time, what it is she would like to do. Ann said she realized she was getting older and "seemed to be frittering away" her time.

At the same time, there has been no pressure for her to make any career decisions, and she noted that this has made it easy for her to be lazy. She said she realizes she has been procrastinating and has justified it by saying she "doesn't want to make any more mistakes" in starting a new career direction.

3) What expectations brought you to the career center?

Ann came to the career center with her husband, who was using the services to explore a career change himself. Ann said she felt ready to begin a "serious search to find a career" but had no idea how to begin.

Ann has a bachelor of science degree, but indicated she was not interested in pursuing a career in any area of science, saying she now found it "too cold." She had recently taken coursework toward a master's degree in library science, but said it no longer interested her because it was not "people-oriented." Ann said she was hesitant to begin anything new because she had "made so many false starts in the past." She recognized that she gets easily bored and was afraid this would happen if she started something new. She also noted that she is not a risk-taker and procrastinates in making decisions. Ann said she was looking for someone to talk with and laughingly added: "I wanted someone to accept responsibility and make a career decision for me."

4) What interactions affected your experience at the Career Center?

Ann commented that the opportunity to talk with a career counselor and tell her story gave her some insight in seeing how her past was influencing her present. She said she learned a great deal about herself throughout her involvement in the study. While the computer-assisted guidance system provided some information that was useful, Ann said she found it "too confining at times in its responses" and felt the options it identified may not have been particularly appropriate. Toward the end of the project Ann noted that she felt "overwhelmed" by the amount of information on her print-out. She said she "couldn't make sense of it" on her own.

Ann admitted she was "very dependent" on the career counselor and asked for time from the counselor whenever she came to the center, either to report on her progress or to explain why she was not following through with the activities identified in her contract. Ann said that her interactions with the counselor were the most important part of her experience at the center.

Discussion

The two adults participating in this qualitative study differed in terms of the complexity and time frame for their career decision making in comparison to "typical" adolescents and young adults who receive services from university-based career centers. The complexity issue is apparent in the number of divergent factors influencing career decision making, e.g. divorce, job dissatisfaction, career decision making of spouse, and related mental health issues. In comparison to adolescents and young adults, the two women in this study had more life experience which provided more potential data for self-assessment, as well as more life roles to fulfill in addition to worker, e.g. spouse and parent. The time frame issue is apparent in that both women in this study expressed a need for making a career decision in the near future, and both women could begin a job search with their existing education and skills. With the exception of graduating seniors, adolescents and young adults tend to feel less time urgency in making a decision and have restricted employment options prior to completing a high school or college degree. As a result of complexity and time frame issues, older adults may be seeking relatively quick answers to extraordinarily complex questions.

Both women in this study had expectations that they would receive professional assistance that would help in: 1) structuring the career decision making process; 2) clarifying self-knowledge; and 3) gaining access to career information resources. Joyce appeared to receive both the assistance and the information that she needed to make progress in decision making. At least initially it would seem that the interventions with Joyce were successful. It is more difficult to determine the relative success or failure of the career interventions for Ann. Using the evaluation paradigm of Peterson and Burck (1982), if the expected output of counseling was Ann's ability to specify an occupational choice and identify a plan for implementing her decision, then the intervention was not successful. However, if the expected output of counseling was Ann's understanding of her present needs and how career counseling and career information could help her in making a career decision, then the intervention might well have been successful.

In the case of Joyce, it was perceived that an older and more experienced counselor would be most appropriate for providing assistance. While world knowledge and opportunity for modeling are potential assets for the older counselor, it is also true that negative stereotypes about the limited experiences of younger persons may prevent older adults from fully utilizing the expertise of highly trained younger counselors.

Both women in this study made considerable use of the various modules of DISCOVER for Adult Learners and SIGI PLUS, obtaining printouts as instructed by their counselor. Given that at least some adults are looking for quick answers to complex

questions, there may, however, be a tendency to move quickly through CACG systems and not take the time necessary for integration of self knowledge prior to obtaining occupational information or evaluating the appropriateness of specific occupational alternatives. For example, after the completion of modules on self-assessment and locating potentially satisfying occupations, the adult might be best served by taking time to review his/her printout and discuss with a counselor the accuracy of self-assessment data summarized in the printouts and the adult's reaction to the list of potentially satisfying occupations provided by the computer. This approach gives the adult an opportunity to: 1) clarify self-knowledge, 2) clarify the relationship between personal characteristics and occupational opportunities; and 3) create or refine a plan for reviewing career information.

Implications for Practice

Adding an adult version of a CACG system to the existing resources of a career center in order to begin providing services to adults is inappropriate unless adequate time is available from trained staff members to address the complexity and time frame of typical adult career concerns. Counselors need to be able to assess the extent to which personal, family, or situational variables impact an adult's career decision making and design appropriate interventions to effectively deal with these factors. For example, it may be that referral for some type of couples counseling is necessary before various dual career options can be realistically explored. Counselors also need to help adults in establishing realistic expectations for the time typically required to make, reality test, and implement a career choice.

It is essential that the adult, the counselor, and institutional administrators have realistic expectations as to typical outputs of career guidance services for adults. For some adults, brief use of print and computer-based career guidance resources may be all that is needed to help the adult in making a career choice. Other adults with more extensive needs may require considerable counseling and may not be ready to make a career choice for some time. The immediate result of receiving services may be to foster commitment to future career decision making, and to prepare the adult to make effective use of career services when other issues are resolved enough to allow for effective decision making. Realistic expectations help to keep the adult, the counselor and institutional administrators from viewing the lack of a concrete occupational choice as a failure when in reality such a premature choice could be inappropriate.

Staff training needs to include an examination of counselor stereotypes about typical adult clients and potential adult stereotypes about younger counselors. Strategies for identifying and correcting inappropriate stereotypes need to be devised.

Counselors need to be able to accurately assess the adult's need for structure and assistance in the career decision making process. In situations where adults need little structure or assistance, it still may be appropriate to recommend that the adult take time during their use of a CACG system to integrate what they have learned before proceeding in the decision making process. Adults needing considerable structure and assistance may require a fairly direct and concrete plan for completing the decision making process that includes alternating computer use and counselor intervention.

Implications for Future Research

The preliminary findings in this study are based on the perceptions of two adults who each used a different CACG system. Caution needs to be exercised in generalizing these results to all adults who use DISCOVER for Adult Learners and SIGI PLUS. Additional research on DISCOVER for Adult Learners and SIGI PLUS is needed to better understand how to best design and implement CACG systems for adults. The following research questions are suggested:

To what extent are adults aware of the interaction of personal, family, and situational variables in the career decision making process?

What typical patterns exist in adults' use of CACG services?

What expectations do adults have when they seek career guidance services? What specific expectations do adults have about the use of CACG systems?

How common are negative counselor stereotypes about adult clients and negative adult stereotypes about young counselors?

What impact does taking time during the use of a CACG system to integrate what is learned at various points in the system have on the decision making process?

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